

IN THE CLAIMS

Kindly amend claim 1 (the only pending claim) as follows:

1. (Twice Amended) A method of mapping the genomic of a turkey in order to identify whether chromosomal rearrangements are present by assaying the positive of one or more ~~An isolated Z-chromosomal DNA selected from the group consisting of Sequence 1 (43.Seq) (SEQ ID NO: 1), Sequence 2 (71.Seq) (SEQ ID NO: 2), Sequence 3 (80.Seq) (SEQ ID NO:3), Sequence 4 (81.Seq) (SEQ ID NO: 4), Sequence 5 (131.Seq) (SEQ ID NO: 5), Sequence 6 (147.Seq) (SEQ ID NO: 6), Sequence 7 (166.Seq) (SEQ ID NO: 7), Sequence 8 (196.Seq) (SEQ ID NO: 8), Sequence 9 (199.Seq) (SEQ ID NO: 9), Sequence 10 (204.Seq) (SEQ ID NO: 10), Sequence 11 (235.Seq) (SEQ ID NO: 11), Sequence 12 (249.Seq) (SEQ ID NO: 12), Sequence 13 (258.Seq) (SEQ ID NO: 13), Sequence 14 (290.Seq) (SEQ ID NO: 14), Sequence 15 (309.Seq) (SEQ ID NO: 15), Sequence 16 (314.Seq) (SEQ ID NO: 16), Sequence 17 (398.Seq) (SEQ ID NO: 17), Sequence 18 (420.Seq) (SEQ ID NO: 18) Sequence 19 (435.Seq) (SEQ ID NO: 19).~~

2. (Cancelled) A Z-chromosomal DNA library that contains at least one DNA sequence according to Claim 1.

3. (Cancelled) A method of using at least one Z-chromosomal marker DNA according to Claim 1 for genetic mapping.

4. (Cancelled) The method of Claim 3, wherein the genetic mapping is effected to construct a Z-chromosome specific microsatellite linkage map.

5. (Cancelled) The method of Claim 3, wherein the Z-chromosome DNA map is that of an avian species selected from the group consisting of chicken, turkey, partridge, duck, guinea hen, and goose.

6. (Cancelled) The method of Claim 4, wherein said at least one Z-chromosomal marker DNA is used to construct a second Z-chromosome specific microsatellite linkage map, and the two maps are compared in order to identify gross chromosomal rearrangements.

7. (Cancelled) The method of Claim 6, wherein said chromosomal rearrangement comprises a translocation, deletion or duplication.

8. (Cancelled) The method of Claim 4, wherein said Z-chromosome specific microsatellite linkage map is generated by confirming the presence and location of said marker DNA on the Z-chromosome using PCR amplification and/or fluorescent *in situ* hybridization (FISH).

9. (Cancelled) The method of Claim 6, wherein said second Z-chromosome specific microsatellite linkage map is generated using a species of avian that is different from the first, and said second map is generated using heterologous fluorescent *in situ* hybridization (FISH) of metaphase chromosomes.